UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL ADJUSTMENT ADMINISTRATION
NORTH CENTRAL DIVISION
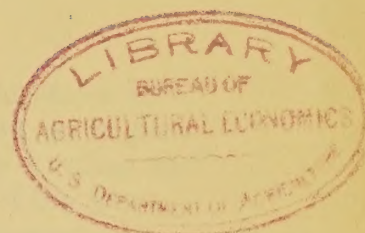
CHARTS AND TABLES FOR USE IN THE PRESENTATION OF "AGRICULTURAL CONSERVATION IN 1938 --WHY?"

I. BETTER BALANCE NEEDED

This chart shows a comparison of farm income and non-farm income available per person for living; each income expressed as a percentage of its 1910-14 average. Farm income available for living expenses represents what farmers have available (after deducting production costs) for the purchase of food, clothing, rent, household goods, transportation, education, miscellaneous living costs, and savings. Likewise, non-farm income available for living represents what non-farmers have available for the purchase of food, clothing, rent, household goods, transportation, education, miscellaneous living costs, and savings.

A balance of the incomes of agricultural and non-agricultural workers is essential to the well-being of both groups. Instability of farm income seriously affects the standard of living on the farm. This leads to lowered general business activity and to unemployment in the cities. Unemployment in the cities means lack of buying power for farm products. This in turn has a further adverse effect on farm prices and farmers' income. Thus an undesirable situation occurs when either farm income or non-farm income is out of balance.

The war brought about a sharp increase in demand for farm products which for five years increased farm income a great deal relative to non-farm income. At the close of this boom period, the supplies of farm products, coming from a country geared to the high production needs of the war, caused a serious decline in the income of the farmer. Since 1920, farm income available per person for living has been low as compared with that of non-farm workers. This disparity was greatest in 1932, when the farm income per person was 42.6 percent of the 1910-14 average, and the non-farm income was 119.8 percent.

While the income of farmers is still below that of non-farmers, the disparity has consistently decreased since 1932, and for the past three years incomes of the two groups have been in better balance than at any time since the war.

I. BETTER BALANCE NEEDED

Farm and Non-farm Income Available For Living Per Person

(1910-14 = 100 Percent)

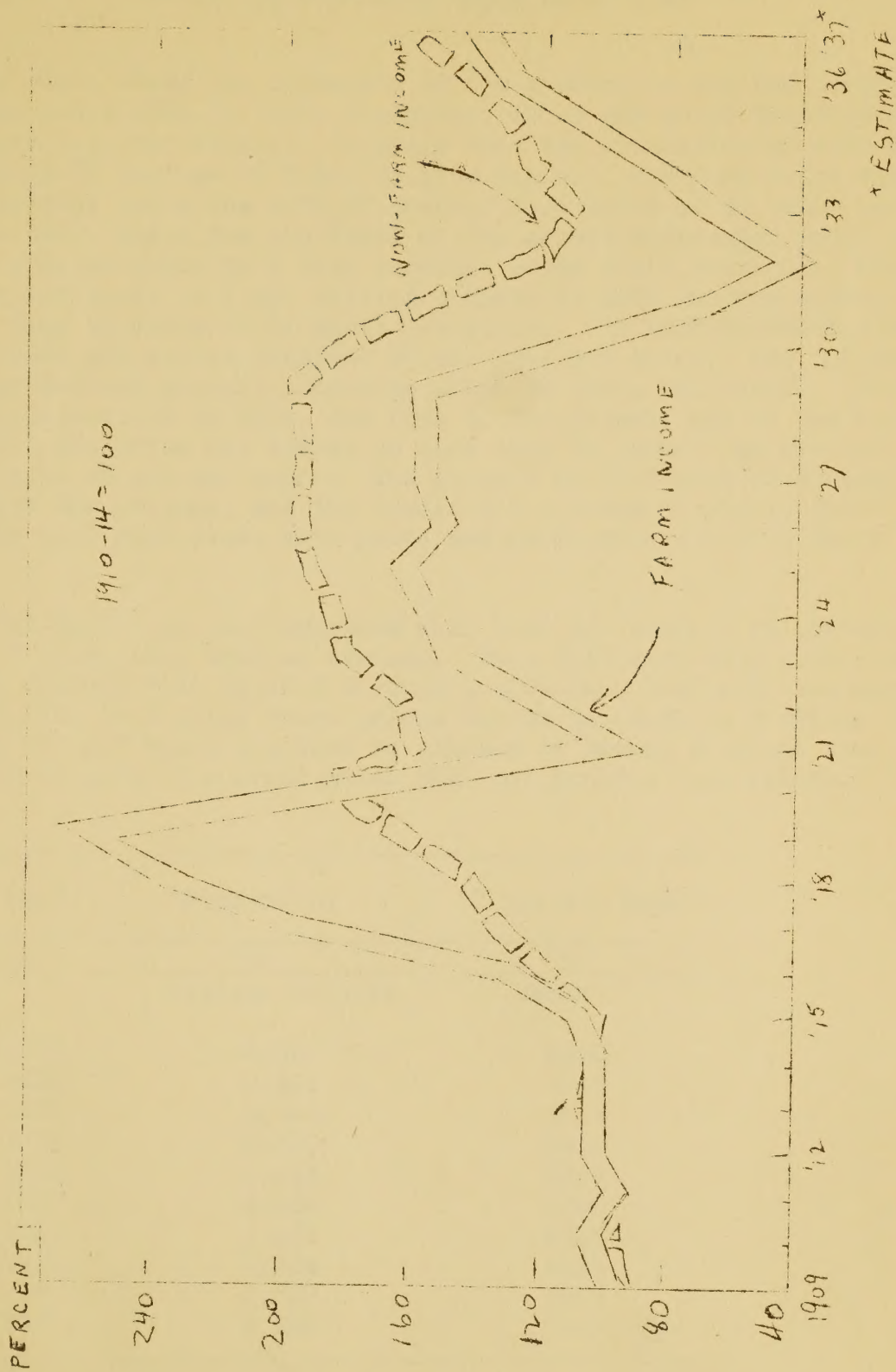| Year	Non-Farm Income	Farm Income	Year	Non-Farm Income	Farm Income
1	2	3	4	5	6
	percent	percent		percent	percent
1909	92.5	96.5	1924	184.7	155.2
1910	95.9	102.8	1925	192.6	163.6
1911	96.7	93.6	1926	196.3	151.3
1912	100.5	101.7	1927	194.0	157.2
1913	105.0	101.2	1928	194.7	155.7
1914	102.0	100.7	1929	196.5	157.9
1915	103.5	106.6	1930	180.6	111.2
1916	118.3	129.7	1931	152.3	70.1
1917	134.3	198.1	1932	119.8	42.6
1918	153.2	234.5	1933	110.5	67.8 /2
1919	163.0	259.7	1934	124.6	85.3 /2
1920	184.9	181.5	1935	131.8	110.1 /2
1921	159.9	97.0	1936	148.4	129.7 /2
1922	163.6	121.6	1937 /1	163.4	139.0 /2
1923	182.1	148.8			

/1 1937 figures estimated.

/2 Payments under the Agricultural Adjustment Programs and Agricultural Conservation Programs included.

Source of Data:

    U. S. Department of Agriculture,
    Bureau of Agricultural Economics.

BETTER BALANCE NEEDED

Farm & non-farm income available for living per person

PERCENT

1910-14 = 100

NON-FARM INCOME

FARM INCOME

240 —

200 —

160 —

120 —

80 —

40 —

1909   '12   '15   '18   '21   '24   '27   '30   '33   '36 '37*

* ESTIMATE

II. A BIG CORN CROP MEANS LOW PRICES.

This chart shows the movements of the production and the price of
corn for the years 1928 to 1937, inclusive, above and below their respec-
tive averages for that period. In years when the production of corn was
above the 1928-37 average of 2,300 million bushels, the farm price was
almost invariably below the 1928-37 average farm price of 66 cents per
bushel. In 1930, which was the first of the severe depression years, the
production and the price were both somewhat below their averages. Pro-
duction was increased to 2,600 million bushels in 1931 and was accompanied
by a sharp drop in price to 32 cents per bushel. In 1932 production was
again increased and prices remained at the same low level. The following year
a reduced production brought prices up about 20 cents per bushel. A further
decrease in production in 1934, due both to the drought and to the Corn-Hog
program, sent the price per bushel to more than 80 cents. An average crop
in 1935 brought an average price. The drought of 1936 sent production
greatly below the average, and the result was a price of almost $1.00 per
bushel. The past year finds both price and production a little above the
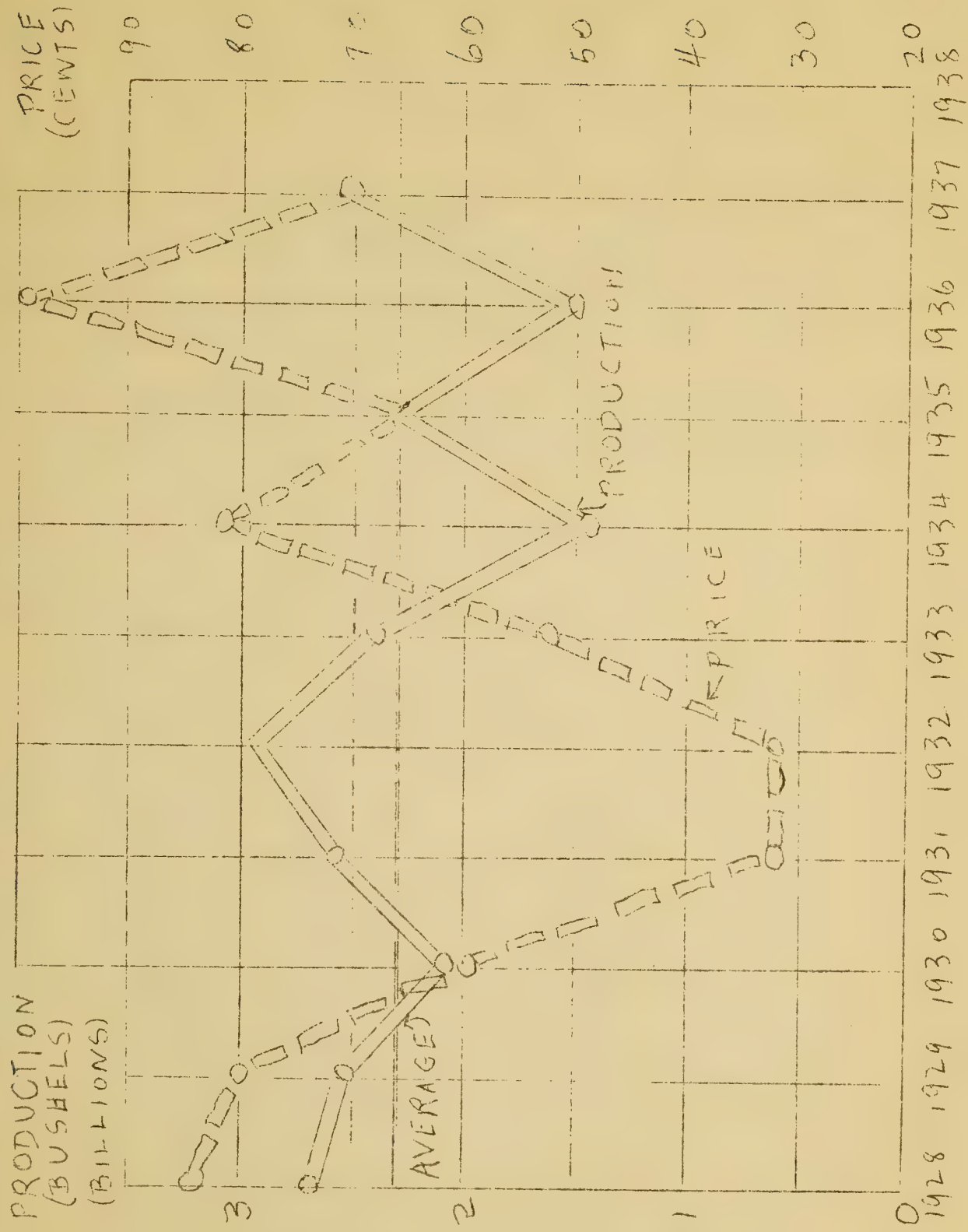average.

Stabilization of corn supplies will tend to ensure a relationship
of price and production near an average. This will mean that both corn
farmers and feeders will benefit through a situation that will not permit
supplies to fall to a point where prices become too high to continue feeding
operations, nor yet would supplies be allowed to become so great that the
product must be sold at a price which will not yield a fair return.

Year	Production	Price Per Bushel
1	2	3
	million bushels	cents
1928	2,666	84.0
1929	2,521	79.9
1930	2,080	59.6
1931	2,576	32.0
1932	2,931	31.9
1933	2,400	52.2
1934	1,461	81.5
1935	2,304	65.5
1936	1,529	99.3
1937	2,562	70.0 /1
10-Year Average	2,303	65.6

/1 Estimated.

Source of Data:

U. S. Dept. of Agriculture, Bur. of Agricultural Economics.

A BIG CORN CROP MEANS LOW PRICES

PRODUCTION (BUSHELS) (BILLIONS)

PRICE (CENTS)

PRODUCTION

PRICE

AVERAGE

90 80 70 60 50 40 30 20

3 2 1 0

1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938

III.   SEEDED WHEAT ACREAGE GOES UP

The total seeded acreage of wheat in 1937 was 14,135,000 acres above the 1926-35 average of 66,468,000 acres. This amounts to an increase of 21.3 percent, of which the Hard Red Winter Wheat area accounted for more than half of the increased seedings. The Soft Red Winter Wheat area was responsible for almost 40 percent of the increase; and the White Wheat and Hard Red Spring and Durum areas accounted for the remainder of the increase.

It would pay the farmer who hopes to get the most money from his farm to think these indications over very carefully before seeding too large an acreage to wheat for harvest as grain.

Year	Soft Red Winter	Hard Red Winter	Durum and Hard Red Spring	White	Total
1	2	3	4	5	6
	acres thousand	acres thousand	acres thousand	acres thousand	acres thousand
1926	12,865	24,428	18,185	5,234	60,712
1927	13,239	27,108	19,623	5,691	65,661
1928	16,167	27,945	21,243	5,797	71,152
1929	12,043	28,017	20,747	6,033	66,840
1930	11,942	29,149	20,056	6,003	67,150
1931	12,151	29,314	19,162	5,371	65,998
1932	11,480	27,950	20,889	5,594	65,913
1933	12,308	27,868	21,584	6,725	68,485
1934	13,467	27,247	17,750	5,098	63,562
1935	14,396	28,823	20,787	5,201	69,207
1936	14,820	30,746	21,974	6,060	73,600
1937	13,275	35,025	20,916	6,387	80,603
1928-32 Average	12,757	28,475	20,419	5,760	67,411
1926-35 Average	13,006	27,785	20,003	5,675	66,468

Source of Data:

U. S. Dept. of Agri., Bur. Agri. Econ.,
Div. Crop & Livestock Estimates.

SEEDED WHEAT ACREAGE GOES UP
(Figures in millions of acres)
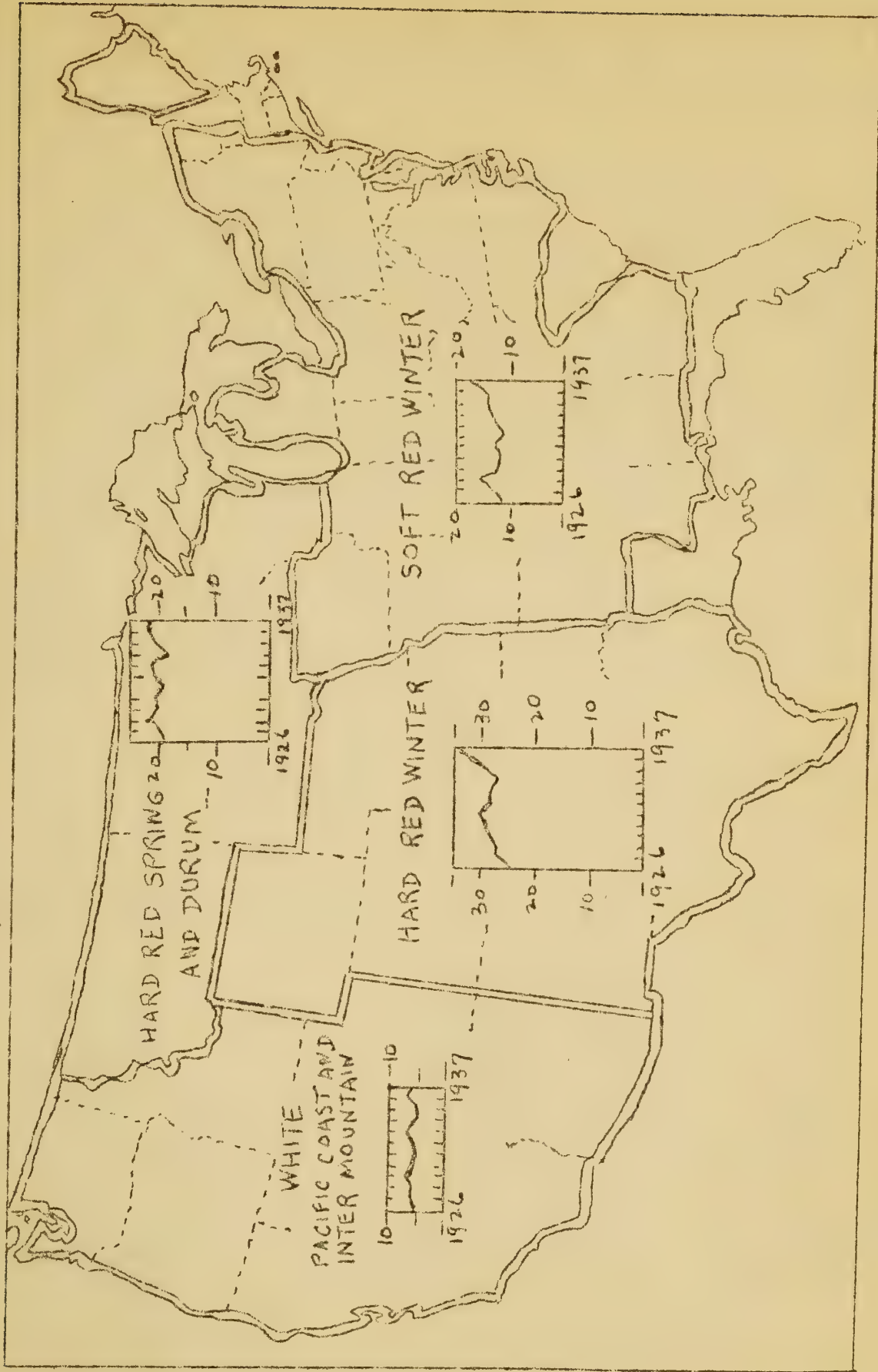
IV. BURLEY TOBACCO PRICES VARY WITH SUPPLIES.

This chart shows for the years 1925 to 1936, inclusive, the average annual price of burley tobacco and the amount by which production exceeds or falls short of consumption. When the production appreciably exceeds consumption in a given year, it is usually accompanied by a depressed price. The reverse of this situation is also true. From 1930 to 1933, when the annual production of tobacco greatly exceeded the yearly consumption, the price was extremely low, falling to 8.7 cents per pound in 1931 when production exceeded consumption for that year by 172 million pounds. From 1934 to 1936 supplies have dropped consistently, and the price rise has been even more marked. This sharper price rise in 1936 may be explained by the using up of supplies held over from previous years, and as a result the demand has become greater for those supplies which are available.

The aim of the farmer with respect to the production of tobacco, as with any other commodity, should be to stabilize production at a level sufficient to supply consumption needs at a price which is fair both to the farmer and to the consumer. The tobacco goals for the 1938 Agricultural Conservation Program will be derived with this end in mind.
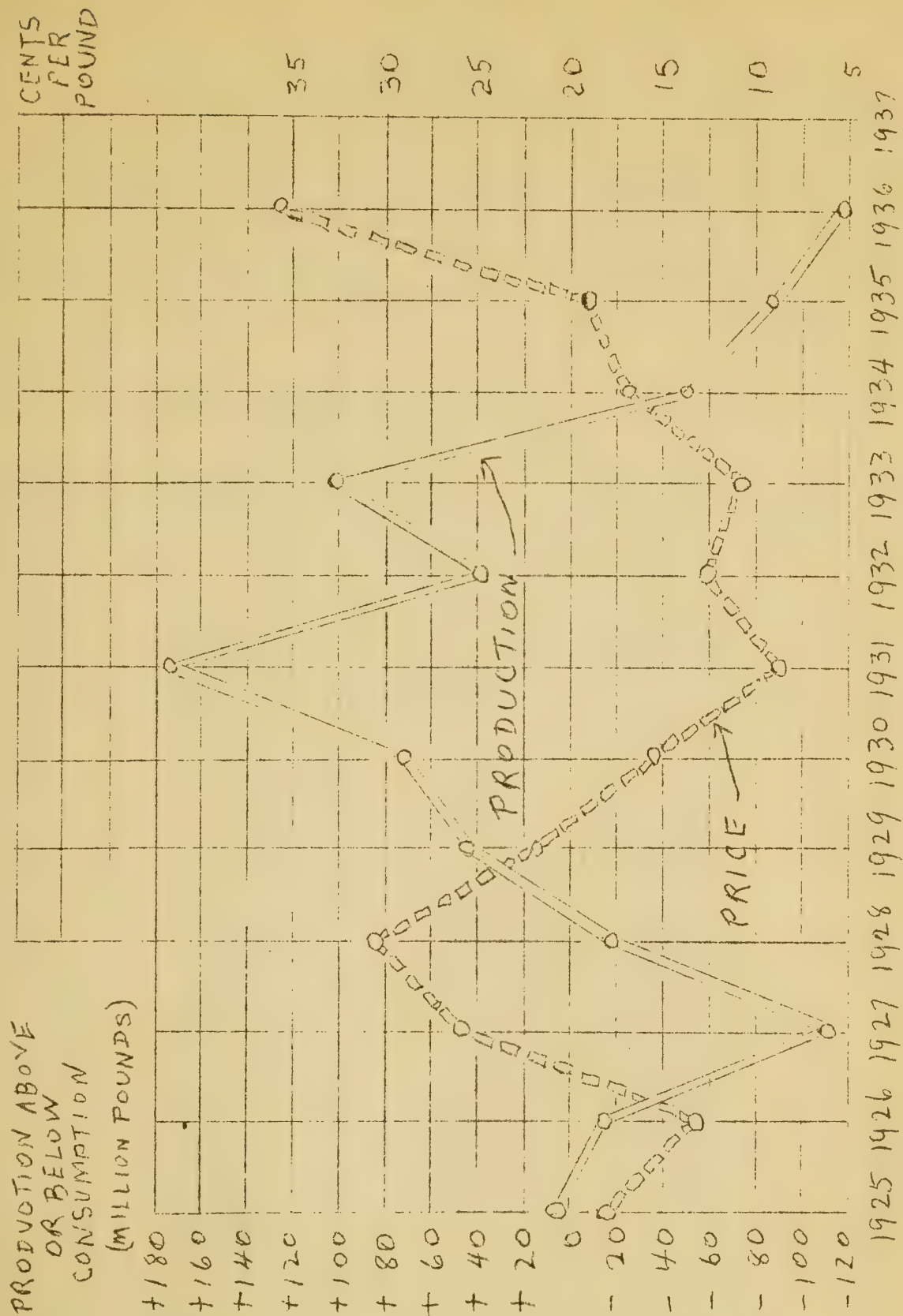
Year	Difference between Consumption & Production	Price Per Pound	Year	Difference between Consumption & Production	Price Per Pound
1	2	3	4	5	6
	Thousand pounds	cents		Thousand pounds	Cents
1925	+ 6,397	18.0	1931	+172,370	8.7
1926	- 15,379	13.1	1932	+ 37,688	12.5
1927	- 112,579	25.9	1933	+100,052	10.5
1928	- 19,032	30.5	1934	- 50,473	16.9
1929	+ 44,085	21.8	1935	- 88,174	19.1
1930	+ 71,911	15.3	1936	-116,690	35.8 1/

1/ Preliminary.

Source of Data:
U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Annual report on tobacco May 1937.

BURLEY TOBACCO PRICES VARY WITH SUPPLY

PRODUCTION ABOVE
OR BELOW
CONSUMPTION
(MILLION POUNDS)

CENTS
PER
POUND

PRODUCTION

PRICE

+180
+160
+140
+120
+100
+80
+60
+40
+20
0
- 20
- 40
- 60
- 80
-100
-120

35
30
25
20
15
10
5

1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937

V. BIG SUPPLIES OF AMERICAN COTTON DEPRESS PRICE

Farmers sold their cotton at five cents a pound in the 1931-32 season. Cotton supplies (production plus carryover) in that season amounted to 25,963,000 bales, which supply was the largest for any of the 18 seasons shown on this chart. Farmers sold their cotton at 30 cents a pound in the 1923-24 season. Cotton supplies in this season amounted to only 13,444,000 bales, which supply was the smallest for any of the 18 seasons shown on the chart.

These wide fluctuations of price and supply are undesirable both from the standpoint of the producer and consumer.

During the three seasons, 1934-35 to 1936-37, when supplies stood at approximately 20 million bales, the price of cotton stood at approximately 12 cents a pound. For the 1937-38 season, with an estimated supply of almost 24 million bales, the price fell to less than 9 cents a pound on September 15.

Season 1/	Production	Carryover	Total Supplies	Price Per Pound 2/
I	2	3	4	5
	thousand bales	thousand bales	thousand bales	cents
1920-21	13,429	6,338	19,767	16.66
1921-22	7,945	9,393	17,338	18.09
1922-23	9,755	5,162	14,917	25.83
1923-24	10,140	3,304	13,444	30.14
1924-25	13,630	2,705	16,335	24.22
1925-26	16,105	3,386	19,491	19.68
1926-27	17,978	5,495	23,476	14.40
1927-28	12,956	7,696	20,652	19.72
1928-29	14,477	5,114	19,591	18.67
1929-30	14,825	4,497	19,322	15.79
1930-31	13,932	6,287	20,219	9.61
1931-32	17,095	8,868	25,963	5.89
1932-33	13,001	12,960	25,961	7.15
1933-34	13,047	11,588	24,635	10.81
1934-35	9,636	10,634	20,270	12.36
1935-36	10,638	9,009	19,647	11.55
1936-37	12,399	6,955	19,354	12.70
1937-38	17,573 3/	6,000 3/	23,573 3/	8.86 4/

Source of data:

U. S. Department of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research.
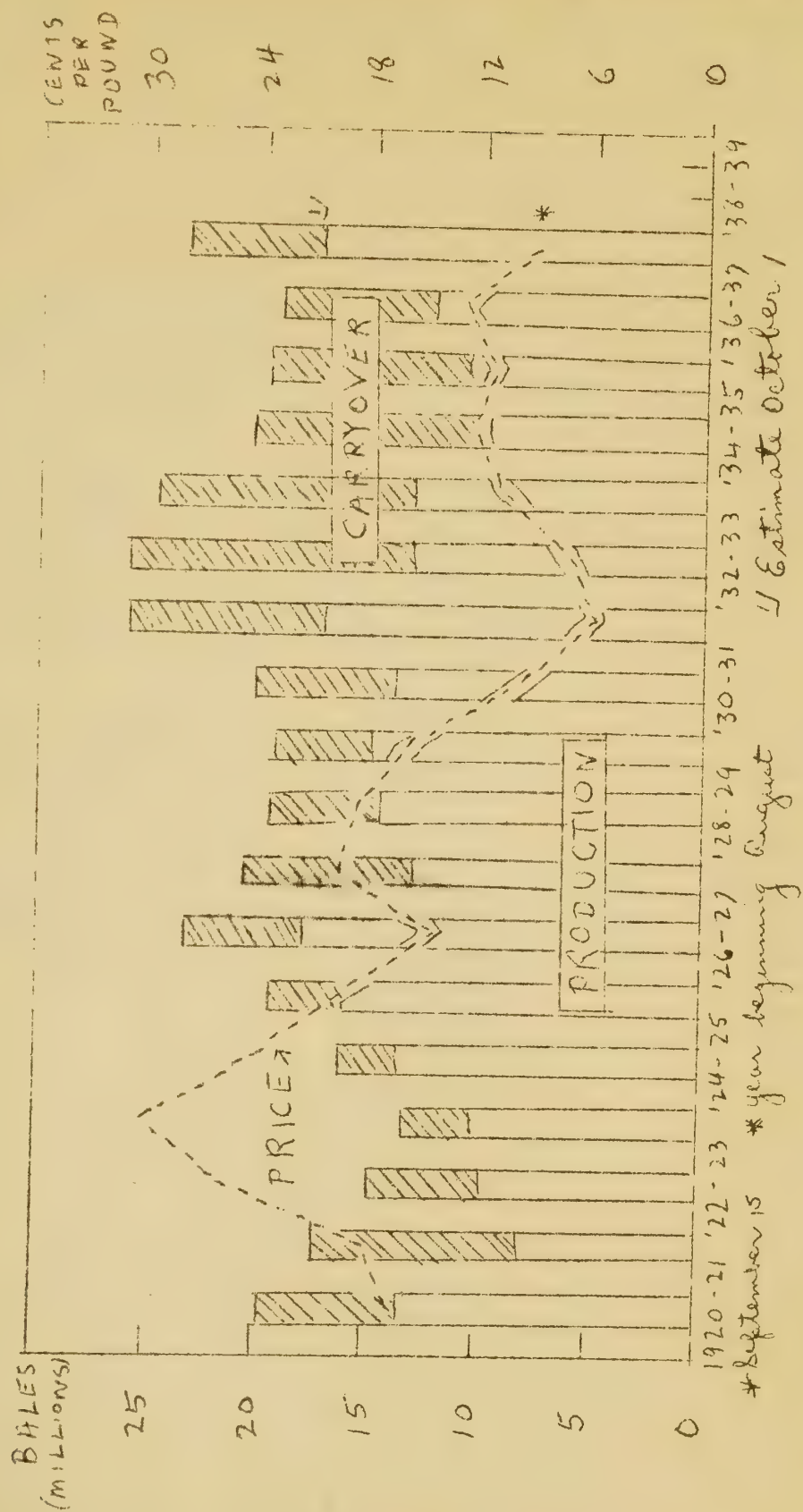
1/ Season beginning in August.
2/ Weighted average price of Middling 7/8-inch cotton at ten principal cotton markets.
3/ Estimate of October 1.
4/ Price as of September 15.

BIG SUPPLIES
OF AMERICAN COTTON
DEPRESS PRICE

CENTS
PER
POUND
30
24
18
12
6
0

CARRYOVER

PRODUCTION

PRICE

BALES
(MILLIONS)
25
20
15
10
5
0

1920-21 '22-23 '24-25 '26-27 '28-29 '30-31 '32-33 '34-35 '36-37 '38-39

*September 15   *year beginning August   ⟋ Estimate October 1
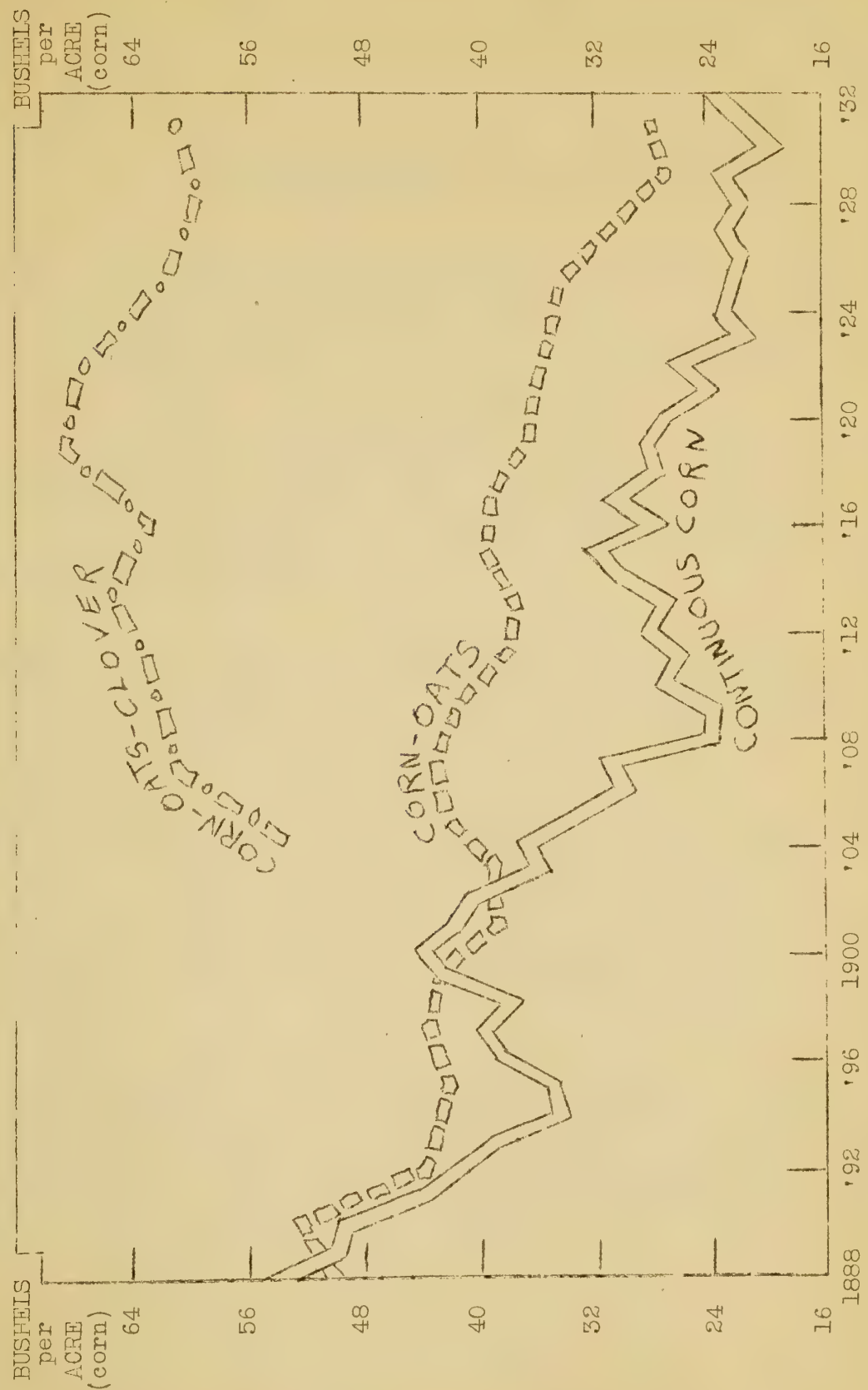
VI.   WHICH ROAD SHALL WE FOLLOW?

This chart is based on experiments in crop rotation conducted over a period of 44 years by the Illinois College of Agriculture on the Morrow test plots. The land consisted of experimental plots. Weather and soil conditions were identical. The seed used in each of the three plots was from the same source, and the only difference was that in one plot of land corn was grown every year, in the second plot corn and oats were alternated, and in the third plot a rotation of corn, oats, and clover was maintained with phosphate, lime, and manure added to the soil.

For the plot planted continuously to corn, the yield in 1908, the 21st year of the experiment, was less than one-half of what it was in the first year of the experiment. By 1923, after 35 years of successive cropping with corn, the yield had fallen to one-third of its original size. Since 1923 the yield has remained approximately constant at that amount. This is an indication of what may be expected by farmers who treat their land in a similar manner.

On the plot where a rotation of oats and corn was maintained the corn yield at the end of 43 years was one-half of what it was when the land was freshly broken.

On the third plot where a rotation of corn, oats, and clover was followed, supplemented by applications of manure, phosphate and lime, yields increased by 17 percent over a 28-year period. This is an indication of what can be accomplished by the application of good farming practices.

WHICH ROAD SHALL WE FOLLOW?

BUSHELS
per
ACRE
(corn)

64

56

48

40

32

24

16

1888   '92   '96   1900   '04   '08   '12   '16   '20   '24   '28   '32

BUSHELS
per
ACRE
(corn)

64

56

48

40

32

24

16

CORN-OATS-CLOVER

CORN-OATS

CONTINUOUS CORN

DATA FROM MORROW PLOT TESTS, COLLEGE OF AGRICULTURE, UNIV. OF ILL.

VII.   <u>EXHAUSTIVE FARMING DESTROYS THE LAND</u>

The experiment illustrated by this chart was performed at Statesville, North Carolina on a restricted area of similar slope and physical characteristics and extended over a period of five years. Four plots of land were used in an attempt to determine the extent of erosion under different farming or operating methods.

At the beginning of the experiment all of the land was in virgin woods. The total area was divided into four plots. One of these was left as it was found--in timber. The second plot was cleared and sown to grass. The third plot was planted to row crops continuously for five successive years, and the last plot was ploughed each year and allowed to remain in unprotected fallow.
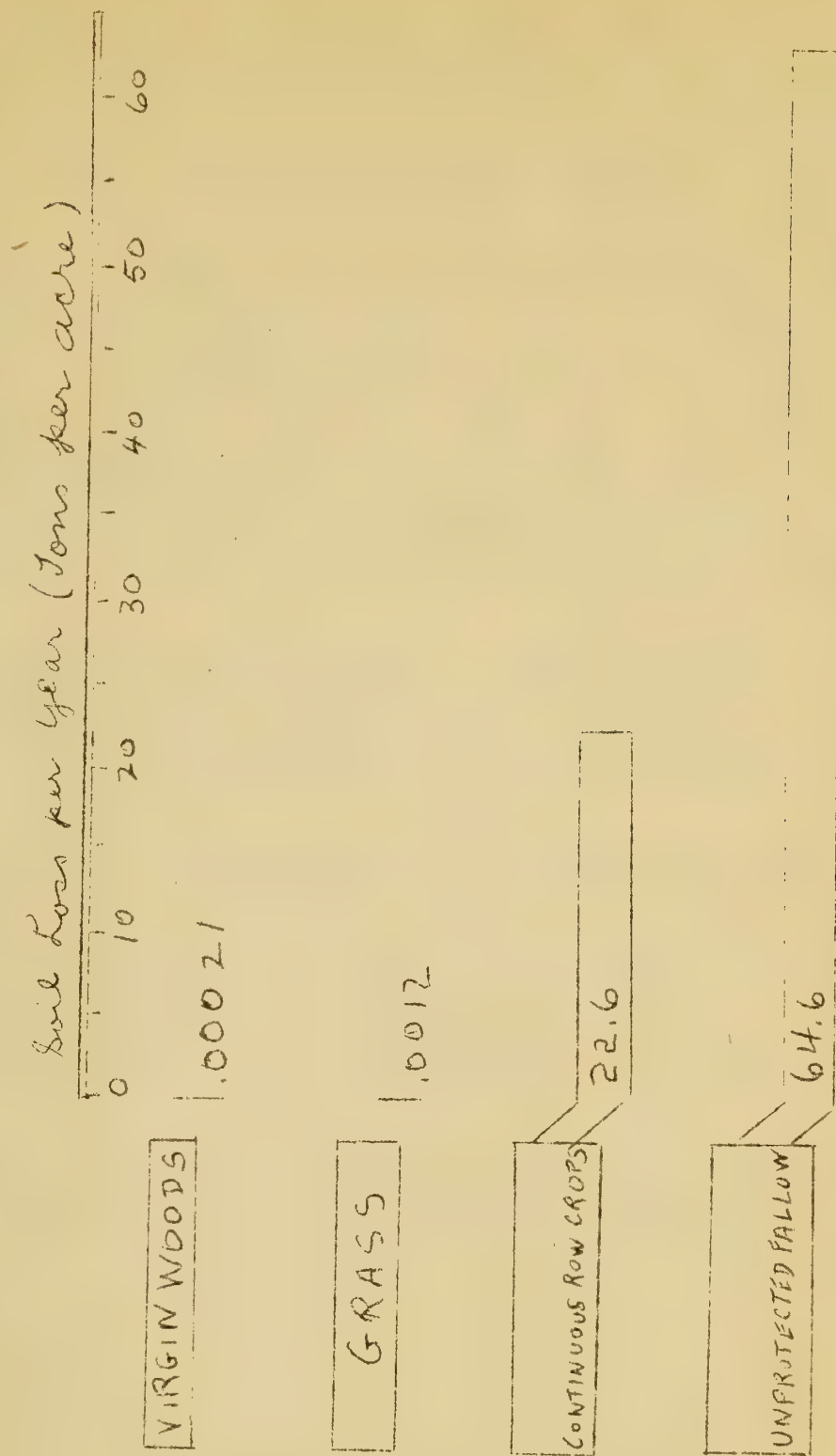
The extent of erosion on the land devoted to forest and to grass was negligible. The forest land eroded at the rate of only 21/100,000 of a ton per acre per year which could not have been noticed except through very accurate measurement. The grass land lost 12/10,000 of a ton per acre per year--also an insignificant amount.

The plot of land planted yearly to successive soil-depleting row crops lost 22.6 tons per acre per year of the fertile top soil that is so valuable in the production of good crops with high yields.
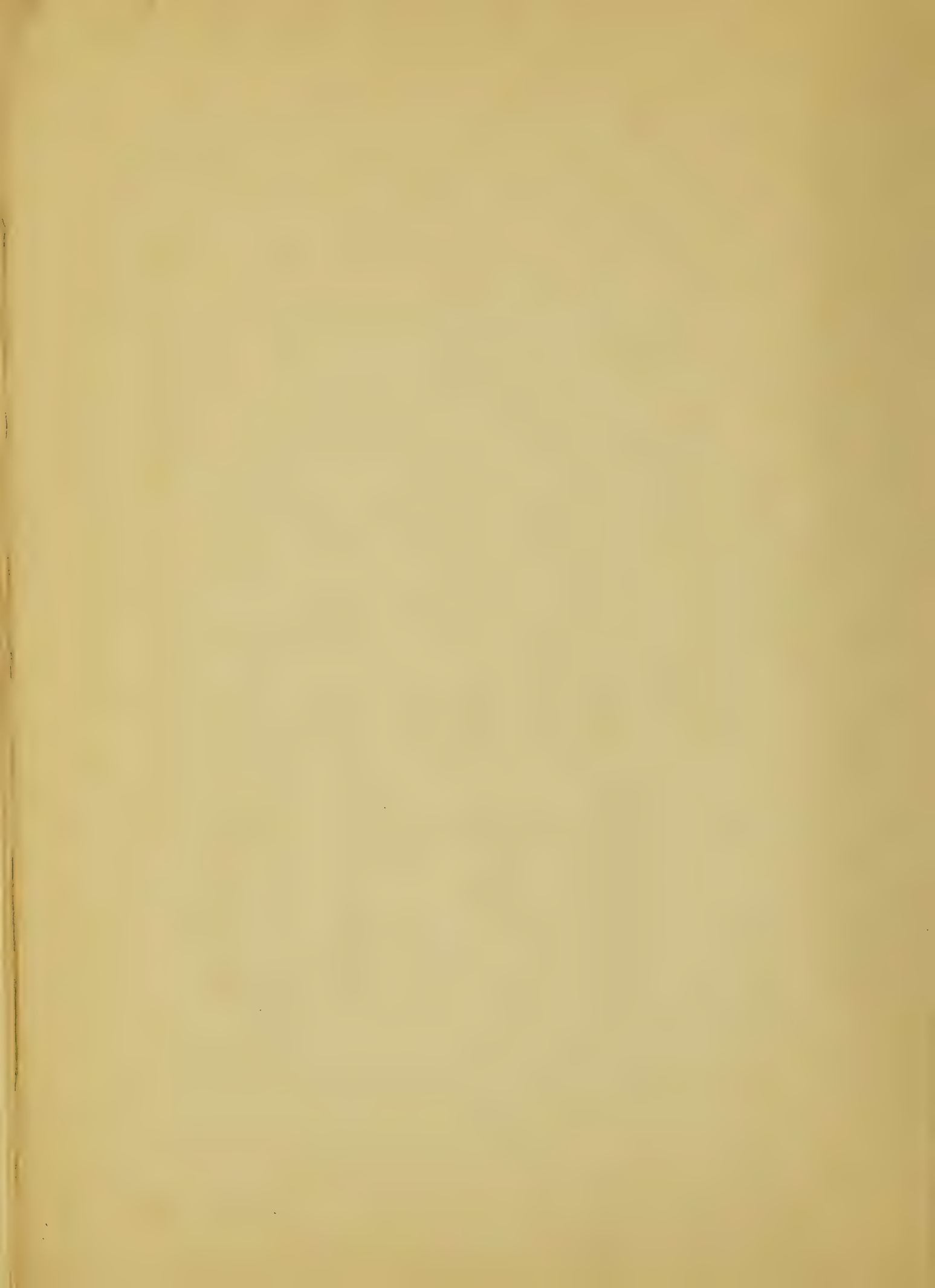
The greatest loss, however, was found on the land left in un-protected fallow. This land eroded at the rate of almost 65 tons per acre per year, or 325 actual tons of top soil lost on each acre for the 5-year period.

This demonstration shows clearly the great value of proper soil-conserving practices, and the need for cover crops and other efficient ways of retaining the top soil. Erosion is a force that is always at work, and often a day-to-day inspection shows no noticeable change, yet in order to keep up the fertility of the land efforts to save the soil must be intelligent, continuous, and unremitting.

EXHAUSTIVE FARMING DESTROYS THE LAND

Soil Loss per year (Tons per acre)

| 0 | 10 | 20 | 30 | 40 | 50 | 60 |

VIRGIN WOODS | .00021

GRASS | .0012

CONTINUOUS ROW CROPS | 22.6

UNPROTECTED FALLOW | 64.6

5-year experiment — Statesville, N. C.

VIII.   GOOD FARM PRICES ATTRACT IMPORTS

Competitive farm imports are not necessarily undesirable, since it will be found that they tend to increase only when the income of American farmers is high, and at no time is their value more than a fraction of the value of the income of the American farmers.

For the period 1925 to 1929, it will be noted that the value of farm imports was greatest, and also during that same period farm income was at its highest for the years shown. In 1932 when income was at its lowest, imports too were at their lowest, and as income increased up to 1936, the value of the shipments from other countries increased.

This is not an alarming situation. If the American farmer expects to have foreign markets for any of his products, he must look for the importation of some products into this country. It is apparent from the chart that the value of the imports is at no time more than a fraction of the farm income.

Since trade with foreign nations is necessary to the welfare of the nation, we must look forward to the importation of some products.

Another reason for imports varying with farm income is that if prices are low in this country, it would not pay to ship in any products. It is only when income and prices are high that this occurs, and it is when income is high that we can afford to buy the goods offered by other nations.

Consumers' interests are protected by imports of agricultural products. Imports serve as a source of additional supply for consumers when prices of domestically grown products became disproportionately high.

VIII.   GOOD FARM PRICES ATTRACT IMPORTS

Farm Income and Value of Competitive Agricultural
Imports into the United States.

Year	Farm Income	Value of Agricultural Imports
1	2	3
	Million Dollars	Million Dollars
1925	11,968	1,001
1926	11,480	973
1927	11,616	996
1928	11,741	955
1929	11,941	1,017
1930	9,454	701
1931	6,968	447
1932	5,337	296
1933	6,406	365
1934	7,276	413
1935	8,508	589
1936	9,530	695

Source of data:

Farm Income - U.S. Department of Agriculture, Bureau of Agricultural
        Economics.

Value of Competitive Agricultural Imports - U.S. Department of Commerce,
        Bureau of Foreign and Domestic Commerce.

GOOD FARM · PRICES ATTRACT IMPORTS

DOLLARS
(Billions)

Farm Income
Farm Imports

12 11 10 9 8 7 6 5 4 3 2 1 0

1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936